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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	Group Art Unit: 2712
)	
SHIGEAKI KOIKE ET AL.)	Examiner: V. BOCCIO
)	
Application No. 08/923,369)	APPELLANT'S BRIEF
)	
Filed: September 3, 1997)	2001 Ferry Building
)	San Francisco, CA 94111
For: DATA RECORDING AND)	(415) 433-4150
REPRODUCING APPARATUS)	
)	Atty Docket: SONY-C5757
)	
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Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is an appeal from the decision dated May 17, 1999
(Paper No. 9), of the Examiner finally rejecting claims 10-16 and 21-
30.

Real Party in Interest

Sony Corporation is assignee and the real party in interest.

Related Appeals and Interferences

There is an appeal currently pending before the Board in the
parent Application No. 08/563,188 of the present application. There
are no other related appeals or interferences known to Appellant, the
Appellant's legal representative, or Assignee which will directly

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affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of the Claims

Claims 10-16 and 21-27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lang, U.S. Patent No. 5,164,839, in view of Takada et al., U.S. Patent No. 5,715,104 ("Takada"). Claims 28-30 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Lang and Takada further in view of Radice, U.S. Patent No. 5,475,498. The rejection of claims 10-16 and 21-30 is the subject of this appeal, and a copy of claims 10-16 and 21-30 is included in the Appendix.

Status of Amendments

No amendments after the Final Rejection have been filed. A response was filed under Rule 116 on September 20, 1999 that contained no amendments.

Summary of Invention

With reference to Figure 1 of the drawings, which is provided in the Appendix hereto at page ix, applicants' invention relates to a video editing system. See Figure 1. The video data editing system of the present invention comprises a video tape recording means (12), a disc recording means (32), and an editing means (50). Source video data is recorded on the video tape recording means at a first data rate. See the specification at page 17, lines 14-16. The source video data is transferred to the disc recording means at a second data rate higher than the first data rate. See the specification at page 17, line 19 through page 18, line 1. The editing means controls the disc recording means when editing the

transferred video data. See the specification at page 19, lines 9-12. The editing means further controls the tape recording means to record the edited source video data with the second data rate. See the specification at page 20, lines 10-17.

Issues

1. Is the Examiner in error in rejecting claims 10-16 and 21-27 under 35 U.S.C. § 103 as being unpatentable over Lang in view of Takada?
2. Is the Examiner in error in rejecting claims 28-30 under 35 U.S.C. § 103 as being unpatentable over Lang and Takada further in view of Radice?

Grouping of the Claims

For the reasons set forth in more detail in the following argument section, the claims do not stand or fall together. Claims 10-16 and 21-27 stand or fall together. Claims 28-30 may stand independently of claims 10-16 and 21-27.

Argument

Rejection of claims 1-6 and 13-18 under 35 U.S.C. § 103

In the Office Action mailed May 17, 1999, the Examiner has finally rejected claims 10-16 and 21-30 under 35 U.S.C. § 103 as being unpatentable over Lang in view of Takada.

The Examiner's Position

The Examiner stated that Lang discloses, in Fig. 2, a video data recording and reproducing system for editing a source of video data (see col. 2, lines 29-38), said system comprising: a video tape

recording means (see col. 3, lines 51-53, ". . . AVRU 11 may be a VCR . . .") for recording onto a tape medium with a first data rate ("real time input rate, from one of the sources"). The Examiner further stated that Lang discloses a disc recording means, editing means and control means for controlling the Disc and VTR, functions such as recording from an external source, internal transfers, reproducing to various external unit mediums etc., editing internally and/or in combination with an external source, thereby controlling reproduction operation such as editing portions designated by an editing operation by the user thru user interface (see Fig. 1, control panels, switches or user interface controls etc.), reproduction/transmission, compression and format conversion {such as to RGB etc.) of received video and editing and handling of audio (see cols. 1-2; and col. 5, line 40 to col. 8, line 59). The Examiner also stated that "VCR-ET" is shown in Fig. 1, comprising elements such as shown in Figs. 1A and 2-4 and is the editing system or unit itself. The Examiner asserted that it is clear in the digital environment Lang can provide high speed input/output of information to and from VCR-ET-10 as seen in Fig. 1, and discloses the utilization of a conventional VCR or video tape recording means, being an analog VCR. The Examiner still further stated that Lang discloses an AUX Digital Input-17 in Fig. 2 to the high speed data bus and discloses the ability to transfer information to and from the high speed bus at high transfer rates.

The Examiner conceded that Lang fails to clearly and specifically describe wherein the video tape recording apparatus or VCR and associated tape medium is capable of transferring recorded information at high speed or higher than a real time rate to the disc recording means and vice versa. The Examiner asserted that it is clear that, due to the limitation of the A/D conversion process for

converting analog video signals to digital in the era of Lang (1988), that commercially available high speed A/D converters can be provided, but the disclosure only associates 30 frames/sec transfers from the analog VTR-AVRU-11 to the disc recording means-13 (see col. 4, line 64 to col. 5, line 15).

The Examiner further stated that Lang discloses that the recording and reproducing means, AVRU-11, can be a digital recording and reproducing unit (see col. 3, line 61 to col. 4, line 43), thereby transferring video and/or audio in digital form to and from the digital AVRU-11, and clearly suggests utilization of alternate storage apparatuses and media.

The Examiner stated that Takada teaches in Fig. 3 an apparatus performing the process of high speed dubbing, utilizing a D-VTR (see Abstract and col. 3, lines 1-4), wherein the digital signals are in digital form (see Fig. 3; and col. 15, lines 1-35, digital signal dubbing input and output) and further discloses controlling by providing synchronization signals, from one unit, being a master reproducing unit, to a recording unit being a slave recorder, for performing dubbing at N fold speed reproduction and recording or high speed dubbing (see col. 16, lines 20-59).

The Examiner concluded that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lang by replacing the "AVRU-11 being a conventional analog VCR associated with media-23", with "the digital tape recording apparatus and associated tape medium, having advantages of providing higher transfer rates or high speed dubbing N fold speeds" as taught by Takada, thereby decreasing the amount of time required to transfer video and/or audio from tape recording and reproducing means or the AVRU-11 replaced with the high speed VTR, to the disc recording and reproducing means or memory

unit-13 and vice versa, from the disc to the tape in any N-fold speed configuration to and from the two recording and reproducing means etc. (see Tape and Disc of Lang).

Responsive to the argument that Lang in view of Takada fails to teach, indicate or suggest the feature of "wherein said editing means . . . controls said recording operation of said video tape recording means", the Examiner stated that the editing means is interpreted as merely the CPU or controller (see Lang Fig. 2, Unit-14, having a CPU-31, Rom-32 and user interface or controller-33) for controlling the recording and reproduction of the recording and reproduction units etc. of Lang, with a user interface thru a user. The Examiner further stated that Lang supports editing functions, therefore unit-14, comprising a CPU etc., and performing editing, clearly the CPU meets the recited feature.

Regarding claims 13, 22 and 25, the Examiner stated that the combination applied meets the limitations of the first operation mode, for recording and reproducing in the first data rate and second data rate (N-fold speed and high speed transfers), between the disc and VTR and vice versa, wherein the editing means or controller [sic] (see CPU, controller and ROM unit-14 in Fig. 2).

Regarding claims 14, 23 and 26, the Examiner stated that the combination of Lang and Takada further meets the limitation of a transfer means (see Fig. 21, "High Speed Bus-34") for transferring the reproduced video data from the tape recording means (see Takada), and said edited video data reproduced from the disc recording means.

Regarding claim 27, the Examiner stated that the combination further discloses a video interface circuit for receiving said source video data (see Fig. 2); and a digital interface circuit for outputting

edited video data (see Fig. 2, from Bus-34 to Audio/Video Tran/Rec. unit 22).

Rebuttal to the Examiner's Position

In response, it is respectfully submitted that the Examiner's rejection is erroneous. It is respectfully submitted that the Examiner has failed to make a prima facie showing of obviousness.

To establish prima facie obviousness, the Examiner must meet three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all the claim elements. See Manual of Patent Examining Procedure § 2143 (1998) (collecting cases).

I. Lang in view of Takada Fails to Teach, Indicate or Suggest All Claim Elements

It is respectfully submitted that the proposed combination of Lang in view of Takada fails to teach, indicate or suggest all the claim elements. Claim 10 recites "wherein said **editing means . . . controls** said recording operation of said **video tape recording means**" (Similar language exists in claims 11 and 16.) It is respectfully submitted that Lang in view of Takada fails to teach, indicate, or suggest this claim feature.

The Examiner asserts, as understood, that Takada teaches a high speed dubbing tape device, and that Lang teaches high speed inputs 17 and 18 connected to high speed bus 34, and a DCU 14 for editing. Thus, in order to read on amended claim 10, Lang in

view of Takada must teach or suggest "wherein Lang's DCU controls the recording operation of Takada's tape device".

It is respectfully submitted that Lang in view of Takada fails to teach or suggest this. Lang teaches that the fiber optic port 18 delivers signals to a fiber optic line from the high speed bus 34. See col. 8, lines 11-14. However, Lang as understood fails to teach or suggest that commands may also be delivered to control the recording operation of the device connected to the fiber optic line (i.e., Takada's tape device). Furthermore, Takada as understood fails to teach or suggest how the tape device can receive commands from a connected device for control purposes. ~

Responsive to this argument, the Examiner asserts that user interface via Lang's CPU teaches this claim feature. However, this assertion fails to address how Lang's CPU provides commands to the tape device. The only connection to Takada's tape device, both as set forth by the Examiner and as disclosed in Takada as understood, is Lang's fiber optic port 18 delivering signals to a fiber optic line from the high speed bus 34. Nothing the Examiner has identified in Lang, Takada or the knowledge of one having ordinary skill in the art teaches or suggests that control commands are also provided on Lang's fiber optic port 18. So even assuming for the purposes of argument that Lang and Takada can exchange data via Lang's fiber optic port 18, this fails to teach or suggest that Lang controls the recording operation of Takada.

In summary, the Examiner as understood asserts that Takada's tape device may be **connected** to Lang; however, this fails to read on claim 10, which recites that the tape recording means is **controlled by** the editing means. Thus, it is respectfully submitted that claim 10 is allowable over Lang in view of Takada.

II. The Examiner has Failed to Provide a Sufficient Motivation to Combine

The Examiner has conceded that Lang fails to disclose data transfer at a higher than real time rate. The Examiner has attempted to cure this defect by stating that "commercially available high speed A/D converters **can be provided**" (emphasis added). However, it is insufficient that prior art teachings can be combined; the Examiner must provide a motivation to combine the references. See In re Mills, 916 F.2d 680 (Fed. Cir. 1990); MPEP § 2143.01. The Examiner has merely provided a statement of operability, not a motivation to combine. Therefore, it is respectfully submitted that the addition of a high speed A/D converter to Lang cannot stand.

III. The Examiner has Failed to Show that Replacing a "Memory" with a "Disc" would be Obvious

The Examiner has asserted at page 4, line 6 of the Office Action mailed May 17, 1999 a "disc recording means-13". The Examiner further has made this assertion in the context of increasing the data transfer rate disclosed by Lang. However, Lang discloses a "MEMORY 13", not a disc recording means-13. The Examiner has failed to state that it would be obvious to replace Lang's memory with a disc, as required to read upon the claims. Therefore, it is respectfully submitted that Examiner has failed to show how the combination teaches, indicates or suggests all the claim elements.

Furthermore, it is respectfully that the Examiner cannot so show. It can be assumed for purposes of argument that a disk is slower than a memory. (If this assumption is unwarranted, the Examiner is respectfully requested to so indicate.) Therefore, the Examiner is in the same sentence at page 4, lines 1-7 asserting that the transfer rate may be increased while simultaneously replacing

the disclosed memory with a slower medium. It is respectfully questioned what would motivate one of ordinary skill to substitute a slower medium (as assumed) when it is desired to increase the transfer rate. It is respectfully submitted that the Examiner's assertion is internally inconsistent.

Conclusion

For the reasons given above, it is respectfully submitted that the Examiner has failed to make a prima facie showing of obviousness regarding claims 10, 11 and 16. It is respectfully submitted that claims 12-15 and 21-30 are also allowable as claims dependent therefrom.

Rejection of claims 28-30 under 35 U.S.C. § 103

In the Office Action mailed May 17, 1999, the Examiner has finally rejected claims 28-30 under 35 U.S.C. § 103 as being unpatentable over Lang and Takada in view of Radice.

The Examiner's Position

The Examiner conceded that the combination of Lang and Takada fails to disclose the utilization of buffering of video and/or audio data to and from the VTR and Disc recording and reproducing units of the editing system or an input and output buffers, coupled to the VTR and Disc and associated buffer control means.

The Examiner asserted that Radice teaches the utilization of a video recorder interface unit (see Fig. 1, "record interface-12") for controlling and performing a buffering, or a memory unit and controller for performing buffering (see Fig. 2, "memory-36", and associated control circuitry, "control circuitry-50" and associated elements 52, 44 and 38) for inputted as well as outputted data to

and from a digital video recorder (VTR etc.) for facilitating desired high speed transfers to and from (see Fig. 1 and 2) having the advantage of allowing a digital video recorder to function as a universal data recorder (see col. 2, lines 31-44), wherein the digital video recording unit is controlled based on capacities of the input output buffering means (see col. 5, line 33 to col. 6, line 67).

The Examiner concluded that it would have been obvious to one skilled in the art at the time of the invention to modify the combination of Lang and Takada by incorporating buffering for the VTR means and Disc means for inputting and outputting video and/or audio data to and from the VTR and disc recording/reproducing means (being digital recorders) as taught by Radice having advantages of enabling a digital video recorder to function as a universal data recorder by utilization of the interface apparatus and further controlling the buffer fullness by controlling the speed of reproduction of the reproduction unit so that the buffer never runs out or over-fills, and to output data at the specified rate such as 1X, 2X (see Radice, col. 3, lines 12-37).

Rebuttal to the Examiner's Position

First, it is respectfully submitted that the combination fails to teach, indicate or suggest all the claim elements. Claim 28 recites that the input and output buffering means buffer data to and from the **disc** recording means and the tape recording means.

Conversely, Radice as understood discloses output (reproduction) buffering from a **tape**. See col. 3, lines 12-25; and col. 4, lines 59-61. The Examiner has failed to show how Radice discloses input buffering from a tape, output buffering from a disc, and input buffering from a disc.

Second, it is respectfully questioned what would suggest to one of ordinary skill to add a disc buffer when such a disc buffer is neither taught nor suggested by Lang, Takada, Radice or the knowledge of one having ordinary skill in the art.

Conclusion

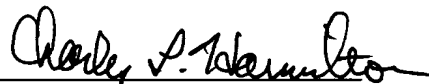
For the reasons given above, it is respectfully submitted that the Examiner has failed to make a prima facie showing of obviousness regarding claims 28-30.

CONCLUSION

The Examiner's rejections regarding claims 10-16 and 21-30 are erroneous and should be reversed.

Respectfully submitted,
LIMBACH & LIMBACH L.L.P.

Dated: 21 Jan 00

By: 
Charles L. Hamilton
Reg. No. 42,624

Attorneys for Applicants

APPENDIX

Claims on Appeal

10. (Twice Amended) A video data recording and reproducing system for editing a source video data, said system comprising:

a video tape recording means for recording a source video data onto a tape medium with a first data rate during a recording period and for reproducing recorded source video data from said tape medium with a second data rate which is higher than said first transfer rate to generate reproduced video data;

a disc recording means for recording said reproduced video data onto a disc medium with said second data rate so that said source video data is copied from said tape medium to said disc medium during a transfer period which is shorter than said recording period of said source video data; and

an editing means for controlling a reproducing operation of said disc recording means to generate an edited video data including a plurality of edit portions which is designated by an editing operation from said source video data recorded on said disc medium,

wherein said editing means controls said reproducing operation of said disc recording means so that said edited video data is reproduced from said disc medium with said second data rate and controls said recording operation of said video tape recording means so that said edited video data reproduced from said disc recording means is recorded on said tape medium with said second data rate.

11. (Twice Amended) A video data recording and reproducing system for editing a source video data, said system comprising:

a video tape recording means for recording a source video data onto a tape medium with a first data rate during a recording period and for reproducing recorded source video data from said tape medium with a second data rate which is higher than said first transfer rate to generate reproduced video data;

a disc recording means for recording said reproduced video data onto a disc medium with said second data rate so that said source video data is copied from said tape medium to said disc medium during a transfer period which is shorter than said recording period of said source video data; and

an editing means for controlling a reproducing operation of said disc recording means to generate an edited video data including a plurality of edit portions which is designated by an editing operation from said source video data recorded on said disc medium,

wherein said editing means controls said reproducing operation of said disc recording means so that said edited video data is reproduced from said disc medium with said first data rate and controls said recording operation of said video tape recording means so that said edited video data reproduced from said disc recording means is recorded on said tape medium with said first data rate.

12. The video data recording and reproducing system according to claim 11,

wherein said first data rate is a real time video data rate.

13. (Amended) The video data recording and reproducing system according to claim 11,

wherein said video tape recording means has a first operation mode for recording said video data with said first data rate and for reproducing said video data with said first data rate and a second operation mode for recording said video data with said second data rate and for reproducing said video data with said second data rate;

wherein said disc recording means has a first operation mode for recording said video data with said first data rate and for reproducing said video data with said first data rate and a second operation mode for recording said video data with said second data rate and for reproducing said video data with said second data rate;

wherein said editing means controls said operation mode of said video tape recording means and said operation mode of said disc recording means.

14. (Twice Amended) The video data recording and reproducing system according to claim 11, further comprising:

a transfer means for transferring said reproduced video data reproduced from said video tape recording means and said edited video data reproduced from said disc recording means.

15. (Twice Amended) The video data recording and reproducing system according to claim 11, further comprising:

an input/output means for receiving said source video data and for outputting said edited video data.

16. (Amended) A video data recording and reproducing system for editing a source video data, said system comprising:

a video tape recorder configured to record a source video data onto a tape medium with a first data rate during a recording period, and configured to reproduce recorded source video data from said tape medium with a second data rate which is higher than said first transfer rate to generate reproduced video data;

a disc recorder configured to record said reproduced video data onto a disc medium with said second data rate so that said source video data is copied from said tape medium to said disc medium during a transfer period which is shorter than said recording period of said source video data;

an editing designation circuit configured to control a reproducing operation of said disc recorder to generate an edited video data including a plurality of edit portions which is designated by an editing operation from said source video data recorded on said disc medium; and

a control circuit, coupled to said video tape recorder, said control circuit configured to control a recording operation of said video tape recorder to record said edited video data.

21. The video data recording and reproducing system according to claim 10,

wherein said first data rate is a real time video data rate.

22. The video data recording and reproducing system according to claim 10,

wherein said video tape recording means has a first operation mode for recording said video data with said first data rate and for reproducing said video data with said first data rate and a second

operation mode for recording said video data with said second data rate and for reproducing said video data with said second data rate;

wherein said disc recording means has a first operation mode for recording said video data with said first data rate and for reproducing said video data with said first data rate and a second operation mode for recording said video data with said second data rate and for reproducing said video data with said second data rate;

wherein said editing means controls said operation mode of said video tape recording means and said operation mode of said disc recording means.

23. The video data recording and reproducing system according to claim 10, further comprising:

a transfer means for transferring said reproduced video data reproduced from said video tape recording means and said edited video data reproduced from said disc recording means.

24. The video data recording and reproducing system according to claim 10, further comprising:

an input/output means for receiving said source video data and for outputting said edited video data.

25. The video data recording and reproducing system according to claim 16,

wherein said video tape recorder has a first operation mode for recording said video data with said first data rate and for reproducing said video data with said first data rate and a second operation mode for recording said video data with said second data rate and for reproducing said video data with said second data rate;

wherein said disc recorder has a first operation mode for recording said video data with said first data rate and for reproducing said video data with said first data rate and a second operation mode for recording said video data with said second data rate and for reproducing said video data with said second data rate;

wherein said editing designation circuit is further configured to control said operation mode of said video tape recording means and said operation mode of said disc recording means.

26. The video data recording and reproducing system according to claim 16, further comprising:

a data transfer circuit configured to transfer said reproduced video data reproduced from said video tape recording means and said edited video data reproduced from said disc recording means.

27. The video data recording and reproducing system according to claim 16, further comprising:

a video interface circuit configured to receive said source video data; and

a digital interface circuit configured to output said edited video data.

28. The video data recording and reproducing system according to claim 14, wherein said data transfer means includes:

an input buffering means, coupled to said video tape recording means and said disc recording means, for buffering said reproduced video data;

an output buffering means, coupled to said video tape recording means and said disc recording means, for buffering said edited video data; and

a buffer control means, coupled to said input buffering means, said output buffering means, and said disc recording means, for controlling recording and reproduction of said disc recording means according to respective remaining capacities of said input and output buffering means.

29. The video data recording and reproducing system according to claim 23, wherein said data transfer means includes:

an input buffering means, coupled to said video tape recording means and said disc recording means, for buffering said reproduced video data;

an output buffering means, coupled to said video tape recording means and said disc recording means, for buffering said edited video data; and

a buffer control means, coupled to said input buffering means, said output buffering means, and said disc recording means, for controlling recording and reproduction of said disc recording means according to respective remaining capacities of said input and output buffering means.

30. The video data recording and reproducing system according to claim 26, wherein said data transfer circuit includes:

a write buffer circuit, coupled to said video tape recorder and said disc recorder, said write buffer circuit configured to buffer said reproduced video data;

a read buffer circuit, coupled to said video tape recorder and said disc recorder, said read buffer circuit configured to buffer said edited video data; and

a buffer control circuit, coupled to said input buffer circuit, said output buffer circuit, and said disc recorder, said buffer control circuit configured to control recording and reproduction of said disc recording means according to respective remaining capacities of said input and output buffer circuits.

FIG. 1

